APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,426	05/05/2004	Chih-Sung Wu	IEIP0013USA	3425

27765　　7590　　02/09/2007	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION	MASKULINSKI, MICHAEL C	
P.O. BOX 506		
MERRIFIELD, VA 22116	ART UNIT	PAPER NUMBER
	2113	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/709,426	WU, CHIH-SUNG
	Examiner	Art Unit	
	Michael C. Maskulinski	2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>22 December 2006</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-19</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-8 and 11-19</u> is/are rejected.

7)☒ Claim(s) <u>9 and 10</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

Final Office Action

Claim Rejections - 35 USC § 112

1.   In view of the recent amendments the rejection of claims 8-10, under 35 U.S.C.

112, second paragraph, as being indefinite for failing to particularly point out and

distinctly claim the subject matter which applicant regards as the invention has been

withdrawn.

Claim Rejections - 35 USC § 102

2.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

3.   Claims 1-8 and 11-19 are rejected under 35 U.S.C. 102(b) as being anticipated

by Midgley et al., U.S. Patent 6,460,055.

Referring to claims 1 and 13:

a. In column 18, lines 48-61, Midgley et al. disclose that the server and backup

server have kernel space and user space (A real-time remote backup system

used in a network system connecting at least one source computer system and

one destination computer system, each computer system consisting of a kernel

space and a user space).

b. In column 2, lines 31-37, Midgley et al. disclose that the agent may comprise

a process such as a computer process that is capable of monitoring a file access

operation that occurs on the data server for determining whether the source data

file is open. To this end, the agent may comprise a file system filter process that

can detect file input and output calls to or through the operating system (and the

backup system comprising: a loadable kernel module that pre- sets up at least a specific system call within the kernel space of the source computer system, receiving a notification generated from the pre-set system call to generate a corresponding file modification message when while a file modification event occurs in the user space of the source computer system).

c. In column 2, lines 37-41, Midgley et al. disclose that the agent may monitor file access operations to record byte level modifications to the source data file, and these byte level modifications may be recorded within the journal file as modifications made to the source data file (a scheduling module queuing each said file modification message from the loadable kernel module).

d. In column 2, lines 24-30, Midgley et al. disclose that the system comprises a synchronization replication process for replicating the source data file to create a target data file stored on the backup server, and a dynamic replication process that is responsive to data, within the journal file for altering the target data file to mirror changes made to the source data (and then generating a corresponding backup command in response to the each file modification message; and at least one network backup unit installed in the source computer system, in accordance to a file information provided within the backup command, backing-up the variant part of the file through the network system to the destination computer system when receiving each backup command transmitted from the scheduling module).

Referring to claim 2, in column 16, lines 9-25, Midgley et al. disclose that the agent process intercepts an IRP generated by a use mode application through a user

action, wherein the IRP would write data to the NT file system. The agent intercepts the request to write the data carried within the IRP. The agent than passes the request to the NT files system to allow the data to be written to the device, which can be a hard disk drive. If the data is successfully written to the device, the device driver returns through the file system and through the filter an IRP that indicates the write was successful. The data for the IRP may than be copied by the agent to a journal file, which is monitoring the file for which the data write, have occurred. Once the data has been written to the journal file or to multiple journal files responsible for monitoring such write operations, the IRP is allowed to complete and the user application is notified that the write has been successful (wherein the loadable kernel module further comprises a replacement unit for replacing an original system call in the source computer system to the specific system call).

Referring to claim 3, in column 11, lines 46-50, Midgley et al. disclose a graphical image of the file structure of the server, allowing the user to select those directories, subdirectories, and data files on the server that are to be source data files and backed up (a graphical user interface (GUI) having an automatic network backup switch for providing the user to switch on/off an automatic network backup function, so that the replacement unit of the loadable kernel module will replace back to the original system call when the automatic network backup function is switched off).

Referring to claims 4 and 19, in column 15, lines 34-48, Midgley et al. disclose each server having source data files that are to be replicated on the backup server may include an agent process that runs as a process on the server and that monitors

accesses to source data files made through the operating system. In one embodiment, the agent process is a file system filter (FSF). An FSF may be a driver layer that sits above a file system driver stack. This filter interface allows the backup system to "hook" a file system and intercept input/output traveling between the operating system and the underlying drivers. The filter may pass the data unmodified, and redirect the data to the journal file as well as perform some time stamping operations and grouping operations that organize the captured data into a format suitable for use by the backup system when processing the journal file (a call determining unit determining whether the specific system call is one of a plurality of predetermined system calls; and a message processing unit generating the file modification message to the scheduling module, according to determination of the call determining unit that the specific system call is one of a plurality of predetermined system calls).

Referring to claims 5, 14, and 17, in column 16, lines 59-64, Midgley et al. disclose that each data file an entry can be made indicating the identity of the corresponding target data file for the respective source data file, a time stamp that provides time and date information, and a field that includes a set of changes that were made by a user mode application to the underlying source data file (wherein the file modification message comprises at least a filename and path of the modified file).

Referring to claim 6, in column 7, lines 1-4, Midgley et al. disclose that as changes are detected to source data files, the information is stored within the journal file and the journal file is transmitted to the backup server where it can be processed by a transaction processor (wherein the scheduling module further comprises a queue unit

for accommodating the file modification messages in sequence from the loadable kernel module).

Referring to claim 7, in column 16, lines 59-64, Midgley et al. disclose that each data file an entry can be made indicating the identity of the corresponding target data file for the respective source data file, a time stamp that provides time and date information, and a field that includes a set of changes that were made by a user mode application to the underlying source data. Further, in column 7, lines 1-4, Midgley et al. disclose that as changes are detected to source data files, the information is stored within the journal file and the journal file is transmitted to the backup server where it can be processed by a transaction processor (wherein the scheduling module further comprises a schedule managing unit for queuing sequentially each said message into the queue unit, and a schedule processing unit for sequentially reading the messages out the queue unit and transmitting the backup commands according to the messages).

Referring to claim 8, in column 16, lines 30-37, Midgley et al. disclose that the agent process can then store the changes within the journal file in a process that time stamps the recorded changes to provide delimitations which indicate the time of occurrence for certain changes to a particular source data file. In this way the journal file may maintain a record of the source data files that are being modified in the order in which these modifications take place (wherein the schedule managing unit and the schedule processing unit use the same algorithm).

Referring to claims 11, 15, and 18, in column 16, lines 59-64, Midgley et al. disclose that each data file an entry can be made indicating the identity of the

corresponding target data file for the respective source data file (wherein the backup command comprises at least the path of the varied file).

Referring to claim 12, in column 3, lines 47-56, Midgley et al. teach wherein the destination computer system further comprises another one same network backup unit for receiving backup data from the source computer system.

Referring to claim 16:

a. In column 18, lines 48-61, Midgley et al. disclose that the server and backup server have kernel space and user space (A method of real-time remote backup used in a network system interconnecting between at least one source computer system and one destination computer system, each computer system consisting of a kernel space and a user space).

b. In column 2, lines 31-37, Midgley et al. disclose that the agent may comprise a process such as a computer process that is capable of monitoring a file access operation that occurs on the data server for determining whether the source data file is open. To this end, the agent may comprise a file system filter process that can detect file input and output calls to or through the operating system (implementing a specific system call that is pre-loaded by a loadable kernel module in the kernel space of the source computer system, to notify a kernel of the source computer system of a file modification event when the file modification event occurs in the user space of the source computer system).

c. In column 2, lines 37-41, Midgley et al. disclose that the agent may monitor file access operations to record byte level modifications to the source data file,

and these byte level modifications may be recorded within the journal file as modifications made to the source data file (the loadable kernel module being notified of said file modification event to determine whether a file modification message should be generated with reference to the type of the specific system call, as soon as the specific system call is implemented).

d. In column 2, lines 24-30, Midgley et al. disclose that the system comprises a synchronization replication process for replicating the source data file to create a target data file stored on the backup sewer, and a dynamic replication process that is responsive to data, within the journal file for altering the target data file to mirror changes made to the source data. Further, in column 16, lines 59-64, Midgley et al. disclose that each data file an entry can be made indicating the identity of the corresponding target data file for the respective source data file, a time stamp that provides time and date information, and a field that includes a set of changes that were made by a user mode application to the underlying source data. Further, in column 7, lines 1-4, Midgley et al. disclose that as changes are detected to source data files, the information is stored within the journal file and the journal file is transmitted to the backup server where it can be processed by a transaction processor (queuing in sequence each said file modification message into a queue unit; sequentially taking and processing the file modification messages from the queue unit to generate a corresponding backup command; and a network backup unit backing-up the modified part of the file to the

destination computer system, through the network, according to the backup

command).

Allowable Subject Matter

4.   Claims 9 and 10 are objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

Response to Arguments

5.   Applicant's arguments filed December 22, 2006 have been fully considered but

they are not persuasive.

6.   On pages 8-9, with respect to claim 1, the Applicant argues that Midgley doesn't

disclose a specific system call. In response to applicant's argument that the references

fail to show certain features of applicant's invention, it is noted that the features upon

which applicant relies (i.e., paragraph 0018 of the Applicant's specification) are not

recited in the rejected claim(s). Although the claims are interpreted in light of the

specification, limitations from the specification are not read into the claims. See *In re*

Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Further, the Examiner

would like to point out that in column 2, lines 9-10, Midgley et al. disclose monitoring file

access operations. These operations are system calls.

7.   On page 9, with respect to claim 1, the Applicant argues, "The file modification

message of Claim 1 is utilized for informing the source computer that a modification has

taken, place but does not involve copying file changes to another area of the source

computer. However, referring to the disclosure stated in col. 16, lines 12-25, the FSF

disclosed by Midgley **fails to create any notification messages** (emphasis by

Applicant), used for instructing following copying operation of the changed data, to other

devices." The Examiner is unsure as to what the Applicant is attempting to clarify. The

Applicant doesn't claim: "Creating notification messages, used for instructing following

copying operation of the changed data, to other devices." Further, there has to be a

notification message in the system of Midgley et al. otherwise the system would not

know when to perform backing up file changes.

8.   On page 10, with respect to claim 1, the Applicant argues, "if a plurality of files

are modified, the system of Midgley requires a plurality of corresponding journal files to

store all changes. The disclosed invention only requires a single queue because each

file modification message contains a file path so the origin of the modification can be

known by the back up system. The claimed feature of queuing file modification

messages is neither taught nor suggested by Midgley." The Examiner respectfully

disagrees. The Applicant appears to be relying on elements of the Applicant's

specification to show differences between the Applicant's invention and Midgley et al.

The claim language clearly states, "a scheduling module queuing each said file

modification message from the loadable kernel module, and then generating a

corresponding backup command in response to each file modification message." In

column 7, lines 36-63, Midgley et al. disclose an agent monitoring multiple file systems

and creating journal files that can be backed up. Further, in column 9, lines 32-38,

Midgley et al. disclose creating a replicated copy of selected source data files and

maintains these replicated data files as target data files. Having multiple files

transferred requires a queue or buffer to send them.

9.   On page 10, with respect to claim 1, the Applicant argues, "The backup system

of Claim 1 utilizes the enclosed file information of the file modification messages to

determine the difference between the original file and the modified file. However,

Midgley discloses a backup system wherein modifications (or an entire file) are first

written to a journal file and then written to the backup system." The Examiner

respectfully disagrees. Once again, the Applicant relies on limitations that are not in the

claims such as "determining the difference between the original file and the modification

file." The Examiner would like to note that "file information" could mean anything when

interpreted broadly and reasonably. Midgley et al. disclose backing up changes to files

and recording versions based on the files (see column 10, lines 25-43).

10.   On pages 10-11, with respect to claims 2-4, the Applicant argues, "According to

the above arguments under the response to Claim 1, the claimed system call is different

from the file system filter disclosed by Midgley. These limitations in claims 2-4 are

neither disclosed nor anticipated by Midgley." The Examiner respectfully disagrees for

at least the reasons given above and the rejection of claims 2-4.

11.   On page 11, with respect to claim 5, the Applicant argues, "The second IRP is

only for notifying a write has taken place, and Midgley does not disclose that said IRP

contains details regarding the modified file." The Examiner respectfully disagrees and is

unsure as to why the Applicant relied upon the citation for claim 1 to argue claim 5. In

the rejection of claim 5, the Examiner wrote the following: in column 16, lines 59-64,

Midgley et al. disclose that each data file an entry can be made indicating the identity of the corresponding target data file for the respective source data file, a time stamp that provides time and date information, and a field that includes a set of changes that were made by a user mode application to the underlying source data file. This teaches the limitation of claim 5: "comprises at least a filename".

12.   On page 12, with respect to claim 11, the Applicant argues, "As detailed under the response to Claim 1, no backup commands are generated by Midgley; rather, when a journal corresponding to one specific file contains information, that information will be directly passed to the backup server." The Examiner respectfully disagrees. The Applicant is proposing that the system of Midgley et al. doesn't have backup commands. The Examiner is unsure as to how any computer system could operate without commands to perform a function. Further, in column 16, lines 59-64, Midgley et al. disclose that each data file an entry can be made indicating the identity of the corresponding target data file for the respective source data file.

13.   On page 12, with respect to claim 13, the Applicant argues, "Midgley does not disclose a specific system call, wherein corresponding file modification messages are generated 'according to the type of the system call'. Furthermore, Midgley does not disclose a single queue for storing all file modification indications, but discloses a plurality of journal files, each journal file containing modifications corresponding to a specific file." The Examiner disagrees for at least the reasons above.

14.   As per the remaining arguments, they have all been addressed in the above paragraphs.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael C. Maskulinski whose telephone number is 571-

272-3649. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Robert Beausoliel can be reached on 571-272-3645. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael C Maskulinski
Examiner
Art Unit 2113